

The
Connecticut River
at Hadley
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THE CONNECTICUT RIVER BELOW HADLEY

By Charles Hiram Thayer
1959

Until 1927, when the present Route 47 was built, the road from South Hadley to Hadley ran through the village of Hockanum, to the covered bridge over Fort River. Northward from the bridge, the road continued through Fort Meadow, along the bank of the Connecticut for a mile, to Indian Hill, a scarp or bluff some twenty feet high, running eastward from the Connecticut to Fort River. This scarp divided Fort Meadow from a higher plain to the north, across which the road passed on to join the south end of Middle Street in Hadley.

Opposite Fort Meadow, and near the Northampton side of the river, lay Shepherds Island, which had formed there about 1750.(1) By 1880 a similar island had formed in the same part of the river but near to the Hadley side and had begun to be covered with trees. The many claystones (concretions washed out from the clay beds under Indian Hill), found there gave it the local name of Claystone Island. And about 1860, the Connecticut Valley Lumber Company built a line of some dozen log cribs across the river at the head of the two islands. Horse teams with sleds hauled traprock from the talus under Titan's Pier in Hockanum, up the middle of the river on the ice to fill and anchor these cribs. About 1894 they were built up higher and refilled with traprock.

These cribs served to anchor the boom which would hold the log-drive each summer until it could be let down in daily drafts

THE CONSTITUTION WITH THE AMENDMENTS

BY CHARLES E. MERRITT
1909

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and stored in the lagoon of the Oxbow near the sawmill. A big log-drive would fill the whole river from the islands up past Indian Hill and around the bend towards Coolidge Bridge.

The forming of Claystone Island, with perhaps some help from the boom cribs, turned the current of the Connecticut into the east bank, beside Claystone Island. In time of high water, the bank wore away rapidly and the river encroached on the highway. The town built a stone jetty at the head of the island about 1885 in an attempt to divert the current, but this seemed only to make matters worse. In flood time the road was under water and impassable, but even at moderate high water, the bank was worn off many feet each year.

It is the nature of the soils along the Connecticut that they erode into vertical cutbanks from four to twenty feet high, and as the river encroached, the road had repeatedly to be moved eastward. While one of the Hockanum boys was going by horse and buggy to Hopkins Academy, it happened that the river in one place by Claystone Island had worn in very close to the road when he went home one night. Next morning, on going back to school, he found that the whole width of his road of the night before had been taken by the river. This happened in 1898.

In 1917 the stone jetty at the head of Claystone Island was built up and extended by the town. This seems to have proved

effective, since bank erosion has stopped at this point and sediments have so filled up the channel that the island is now joined on to what remains of Fort Meadow. However, from just above the jetty for a half-mile up river and along Indian Hill, severe erosion continued.

B. K. Emerson, the geologist, of Amherst College, said about 1900 that Indian Hill was a scarp cut into a high level terrace by the meandering of Fort River. At time of low water, he studied the beds of contorted varve clay exposed here; noted the cross section of the old channel of Fort River just below the scarp; and studied the deposits of wood, leaves, etc., found in its bottom. L. R. Wilson, geologist, of the University of Massachusetts, found corncobs in this deposit in 1945 and, by the Carbon 14 method, determined their age to be about 800 years. Tradition says that Indian Hill had been a campground of the local Indians and that skeletons of Indian burial had been exposed at various times by the wearing away of the river. A sandstone marker inscribed "Indian Hill" was set up by the D.A.R. at the top of the scarp beside the road about 1905.

The Connecticut River from Coolidge Bridge flows almost due east to Indian Hill and there turns 130 degrees to flow almost southwest.(2) Erosion at this sharp bend has been rapid since 1880 and, because of the forty-foot height of the eroding bank,

has been somewhat spectacular. By 1899 the river had torn away the bank to within a few feet of the wheeltrack in the road, and all that summer anyone who drove by looked directly down into the river. One oldtimer said, "I always set light on the seat going by that place for fear the road would slide off and dump me into the river." It did actually happen that a man who was cultivating corn a bit north of this spot came back from his dinner to find that the ends of the corn rows he had worked on in the morning were gone.

In the fall of 1899, a new road was built some 150 yards to the east. In the cut-and-fill work necessary to take the new road up the steep slope of Indian Hill, five skeletons were discovered, all buried in the flexed position, lying on the side with knees under chin, and all about two feet under the surface. Two of these, lying very close together and apparently buried in one grave, were carefully uncovered and removed in undisturbed position for the Amherst College collection.

Somewhere in the 1920's, an engineer at M.I.T. built a scale model of the Connecticut at the bend by Indian Hill, in order to study the cause of such rapid wearing away of Hadley land. A newspaper report said he found that the form of the channel here produced a vertical roll or corkscrew current, which is very effective in bank erosion.

More and more of the riverbank at Indian Hill wore away until, during the fall flood of 1927, the road built in 1899 followed its predecessor into the river. The D.A.R. marker was rescued and now stands beside the Boston Milepost on the Bay Road at Middle Street. The single house on Indian Hill has twice been moved back from the encroachment of the river. Even after the second move, its owner cannot have felt too secure from the advancing Connecticut. He surely did not expect trouble from Fort River, and yet it came.

On the morning of July 14, 1948 (3), he led his cow down the scarp and staked her out some 200 yards from his house. That night he had to lead the cow six miles to bring her back to the barn. During that afternoon a very heavy rainstorm struck South Amherst. Though the official weather station at the University recorded only a little over an inch, both Dr. Theodore Baird of Shays Street and Charles Hiram Thayer of South East Street measured four inches of rain. This cloudburst threw Fort River into such violent flood that it tore open its pre-historic channel again and formed a mouth into the Connecticut a mile north of the one near the covered bridge where it had flowed since first seen by the white men.

Fort Meadow cannot now be reached from Hadley except by the long trip around through Lawrence Plain to Hockanum and

north again through the covered bridge. Most of the farm land there has been abandoned by its owners and allowed to grow up to brush. There is at present a proposal for the town to protect the riverbank here against further wearing away, but one wonders if it is not too late, and if the value of the land concerned will justify the expense..

- References: (1) History of Hadley, Judd, p. 300.
(2) U. S. G. S. Water Supply Paper 996, Jahns, pp. 71-72.
(3) Hampshire Gazette, July 15, 1948.

FOUR FLOODS IN FIFTY YEARS

by
Frank C. Reynolds

This is the first of four articles on Floods and Storms in relation to the Connecticut River and Hadley during the past fifty-nine years. Not only has the writer lived on the broad West Street and shared these experiences but also, in his official position, as Selectman, has a sense of responsibility to protect the town as a whole in its vulnerable relationship with the Connecticut River.

From the beginning of the town of Hadley we know that the difficulties experienced in crossing the river caused not only the setting up of grist- and saw-mills on each side of the water but the establishment of churches and the Town of Hatfield as well. The early Town records make frequent mention of the wearing away of the river banks and the need to relocate roads and buildings. North Lane has been moved southwards three times. Homes there have been washed away. In 1807 the river cut a new channel across the School Meadows in North Hadley and gradually silted in the old channel making that part of the land a part of the west bank. In 1840 again the main current cut through Hockanum and placed Hockanum meadows to the west of the main flow. Is it any wonder residents of the center of Hadley fear the activity of the river when it overflows its banks and takes a more direct route to the ocean where it can! The stone monument for Indian Hill has no ground left to stand on. It was moved to a safe place, but the land which it was to mark for posterity has itself been washed away. Could the marker be given a floating base to show where once Indians and white men lived and worked, died and were buried it would probably be considered a danger to navigation. Erosion which has gone on constantly making gradual changes in the location of the river banks

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is spurred to catastrophic extent by extremes of wind and weather.

There used to be a tradition among the older people who had lived in the West Street section of Hadley that in a lifetime a person would be sure to see at least one major flood. In the last fifty years there have been four major floods and several that were almost major.

The 1913 Flood

The first flood of the Twentieth Century occurred in March, 1913. It had been a severe winter with a great deal of snow which started to melt rapidly the last week of March, making the river rise quickly. There was a heavy thickness of ice as the river broke up and ice floes jammed at the bends of the river. During the night of the 27th the water started to flow over the banks into the north end of West Street. Frantic shoveling by residents raised a four-foot small dike near the Fitzgerald home and also in a low spot west of the Cahill home on Middle Street, which was sufficient at the moment to prevent water flowing down the streets. The very thick ice was about ten feet higher than the banks of the river, causing great fear among the residents who visualized their homes being destroyed by the great power manifested in the water and ice. Water set back up lower West Street to the trolley tracks on Russell Street in many places. Cellars were flooded in some houses. John Crosier going down cellar to put coal on his furnace discovered his cellar was flooded and a sitting hen with her eggs hatching was floating about in her wooden box. He was brought up stairs to the kitchen to complete her task. Water set back up lower West Street to the trolley tracks on Russell Street in quite a few places. Cellars were flooded in some houses. The railroad tracks along the river from Northampton to Mt. Tom Junction as well as some places between the Holyoke Dam and Mt. Tom Junction, were completely under water. The writer was a passenger on a slow-moving train that literally went to sea as it cruised slowly along on an invisible track. This was frighten-

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ing for the passengers. Water was high and over the highway, where the Sportsman's Club now stands. The meadow below Cross Path Road was deeply covered. A large section of the bank was deeply ravined by the river flowing north to south because the river was plugged with ice at Honey Pot turn. Later the State protected this section from further loss by riprapping the bank with stone, as was done also along the bank north of Middle Street. These two areas were to become vitally important within the fifty years which made the history of the recent past.

At the time of the 1913 flood there was a large amount of livestock in the flood section of Hadley, and practically no boats available for rescue work. No bulletins or warnings to the inhabitants were issued to any extent, and the residents just had to wait and see what was going to happen. Luckily the rain stopped and a spell of zero weather up north checked the flow of water from there. The ice jams gradually honey-combed and slipped away. Had there been any degree of rainfall, or continued warm weather over the watershed, conditions were ripe for a flood of the 1936 magnitude. The river did not rise as high as in the more recent flood of 1938, but an enormous pile of ice was deposited on the Hockanum Road, which then ran through the Fort Meadow. In order to open the road the ice, which was higher than a horse's back, had to be chopped and it had to be done by hand as bulldozers had not yet been invented. Needless to say it was a Herculean task. It was said that the same thing had been necessary after a rise in the river in 1897 and again shortly after 1900.

Pictures available of south West Street and the ice pack at the north end of West Street.

The 1927 Flood

During the month prior to the November, 1927, flood the ground was well saturated with water from a series of minor rainfalls, considerably in excess of normal. All previous rainfall records in Vermont were broken by the continuous rain from November 2nd to 4th. This was only slightly less true over the entire Connecticut River watershed. In general the watershed on the westerly side was greater than that where the streams flowed into the Connecticut from the easterly side. The tributary streams rising with great rapidity crested late on November 3rd and the early morning of the 4th. Fully 60% of the rain was in the run-off. In Vermont the greatest damage was on the tributary streams, for when the crest of the White River reached the Connecticut, it overflowed.

Hadley people had been busy on Thursday and Friday taking down and stripping tobacco, and not much attention had been paid to the river. About 2:00 P.M. Friday the news spread that the river was on a rampage. Folks had always thought of floods as Spring episodes. During that Friday afternoon water began to flow across the Hadley Peninsula below Cross Path, taking with it stacked and husked corn and almost catching several trucks that were attempting to rescue corn in this area. Friday night people living on West Street or in the possible path of the flood moved valuables upstairs, and during the night many men sand-bagged low portions of the area north of West Street Common and the North Lane area. No dikes had been built in those places.

The river rippled higher and higher. Saturday, farm animals and machines were moved to safer places; many women and children were housed out of the flood area. The river did not top the sand-bag dike on the north end of West Street, but Saturday night water flowed into West Street from North Lane and west of the street. As the main river was not clogged with ice the current was not too stiff. Much debris floated by, including an occasional tobacco barn which crashed into the Northampton bridge and was swept under the flooring, to be found later

destroyed in the Hockanum or Fort Meadow area.

There was great loss in tobacco which was lying in piles ready to be striped, as well as in ruined onions and carrots bagged and waiting for shipment in the barns. Erosion of land was not too severe due to the relatively short period of flooding. The river rose and fell fast, coming into West Street Saturday afternoon and all gone by last Sunday night.

There was little or no organized rescue work, but the State Police assisted the local police in attempting to get the families out of the flooded areas. The usual rumors of broken dams on the Connecticut were spread to help in scaring people out of the flood area, but many people ran upstairs and did not answer the door when the police came. The few who did leave stayed with friends or relatives or at hotels in Amherst. The reports of expected flood crests were not accurate and were of little help to people who wanted to know what to expect.

There were many humorous incidents, too. Two grown men paddled about in a canoe Friday night, much under the influence of fire water, and stopped at any house where they saw a light with the announcement that Turners Falls dam had gone out and a sixty foot wall of water would be there any moment. Folks recognizing the tipplers told them to be sure to drown first. One farmer in the process of tearing down a big barn spent two days collecting many of the large beams that were scattered over several miles. Another farmer found his flock of poultry floating about on the boards and beams from this same barn. He finally got them all towed to a knoll where they stayed until the water fell enough to enable them to walk home. Two houses on the north end of West Street, and more on the south end, had water on the floors. The E. & N.R.R. embankment was washed out in two places west of West Street. This was to happen again in two future floods. Water levels in the great meadow plain were high enough so that the tins of tobacco leaves hung on the first tier were just wetted. One farmer, E.L. Cook,

unable to get help to take down his tobacco on Thursday and Friday, found he was the only one not to lose his crop because it was still hanging. Although there was much canoeing and boating, still there were not many boats available. The crop loss came to several hundred thousand dollars. Some barns were lost from Point Meadow in North Hadley. A section of the river bank about 1200 feet long just west of the Broad Street had been riprapped in 1926. This was providential as otherwise there would have been heavy erosion there. Because demands for dike protection were made to the Selectmen and State authorities, a weak dike was constructed in the Fall of 1928 but never entirely completed because the Selectmen balked at paying the rather small amount of damages demanded by a person who would have lost some land when the dike was built. The dike, waiting for the 1936 flood to come extended from Middle Street to the sidewalk on the west side of the Wide Street where it ended abruptly.

This 1927 flood was a so-called tributary flood, caused by many small rivers and brooks discharging into the Connecticut River at the same time.

Rainfall over the watershed in November, 1927, 9.4 inches (Flood Control Document #455, Dec. 7, 1937, Army Engineers Report)

(Some pictures available)

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The 1936 Flood

Records of floods in the Connecticut Valley go back three hundred years but the 1936 flood, the greatest of them all, may well be called the "Once-in-a-Thousand-Years-Flood." According to geological studies it reached heights that had not been equalled for many centuries.

The river rose twice - March 10th and 18th. On the 11th and 12th a rainfall of from 1.5 to 7 inches was accompanied by a rise in temperature, which melted the snow in the upper watershed estimated at between ten and forty inches, and sent it into the Connecticut River. With this river and all its tributaries at near peak capacity, it rained steadily in the northern part from the 16th to the 21st, stopping for a while on the 20th. In the southern part, it rained on the 18th, 19th and 21st. The average volume was 4.5 inches. The main river crested in Hadley from the 19th to the 21st, with a total volume of 200,000 cu. ft. per second. The excessive rainfall from the north was in the Connecticut River when the heavy rain in the Hadley area was causing all local streams within twenty-five miles to discharge extra water also. Bursting into Hadley Street on the night of March 18th, Wednesday, at about 8:30 P.M., with a three foot rise in an hour, it continued to roar through the older part of Hadley until late Monday. The level of the water scarcely changed at all. The crest took about a day and a half to pass Hadley and by Friday afternoon it seemed to be a little lower. People wondered where it all came from and if the water would always be where it was then. Enormous quantities of ice floes crashed along, carrying trees, barns and bridges with it. The roaring flood sounded like a hundred heavy freight cars on a sub-zero night rushing along a railroad track! Out doors one could scarcely hear another's voice at close range.

Trucks, cars and later rowboats assisted in the evacuation of residents of Russell Street and West Street after dark on the 18th. Chester Smith's Ford

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truck was seen standing in water almost over the headlights near Niedbala's store at 11:30 P.M., with the motor running. Women and children were brought to it by boat and all were safely carried to the Town Hall. On this motor the distributor was low in front. The fan belt had been removed but the river water kept it cool. It was a miracle it kept running.

A motorboat from Amherst started a rescue mission down Russell Street west of West Street. With Mr. Woody and his son, Frank Hart and Tom Hannigan already passengers, they stopped to pick up William McGrath at his home, and had only just started away when the railroad embankment just north gave way under water pressure, overturning the boat. The five men were thrown into the rushing stream filled with ice, logs and debris. Hart and Hannigan managed to climb into an apple tree where they clung till rescued at daybreak. Woody and son were carried on ice cakes to Aqua Vitae swamp where they climbed into trees and were rescued hours later. McGrath was carried away and his body never found.

One thing proved by this flood was that the construction of most houses was strong enough to withstand flooding, and rescues should not have been attempted at night. The light poles had been knocked down by ice, so there were no street lights. There is no explanation of why these five men were in this boat, almost losing their lives, unless they were going along for adventure, which they certainly had. Mr. Woody's account of their experience won an award from a well-known national magazine.

Stewart and Dubois made some spectacular rescues with their well-balanced fishing boat on the morning of March 19th. The warm air and the great ice packs caused a dense white fog to settle all over the Valley making rescue operations difficult. Stewart rowed the boat facing forward so that he was able to avoid the debris floating along on the river which was moving at nearly 20 miles per hour. The two men rescued John and Peter Kusick, who were isolated in a large

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elm tree west of their house which they had climbed when the water got too deep in their house on Bay Road. During the night of the 18th many women and children and older men had been taken to Amherst and housed in quarters at Amherst College and in buildings of the University.

The Hadley Town Hall was well filled with young men waiting for daylight to come. Most of them had been thoroughly soaked in attempting to rescue people and farm animals so the large hot air registers upstairs were drying out some men most of the night. Many tried to sleep on the floor or hard benches, but always there was someone coming in with a new story and sleep was forgotten.

At about 6:00 A.M. a large trailer truck roared up to the Town Hall from the East carrying a huge lifeboat and many young sea scouts. Quickly it was unloaded and with a Hadley policeman as a guide, they disappeared in the almost impenetrable white fog. By the time they got two hundred feet away they were invisible. The current was so swift down the street from the north that it was difficult to row straight ahead. They rescued a group of men from the Mileski home and other houses in the area then known as Elmwood. On the second trip they went south and after much labor through a heavy ice pack rescued Mooty and son, whose cries for help had been heard for hours. In the afternoon they lowered James, Mary and Thomas McGrath into the boat from the second story of their home in North West Street. Thomas, suffering from a heart attack, died in the Mass. State College Hospital later that day. On Thursday afternoon, Maurice Melligan rescued Mr. and Mrs. William Keefe; Mr. and Mrs. John Keefe and daughter, Catherine; John and Kate Byron; Mrs. McQueston and Ruth and Theodore. Since these homes had been above the rise of the river during the 1927 flood, they had been considered safe. This accounted for the fact that people who had only a mild adventure in 1927, were reluctant to move out or even to move furniture upstairs, since we were not warned that this might be the greatest flood ever known. Untold losses in household goods resulted. Four houses on West Street were high enough so water did not

come in; the water in the others was anywhere from a foot deep to ceiling high. The Horton and Gesiorek homes on South West Street were among those most deeply inundated. One of the strange features of the flood was that although many homes were deeply immersed in water, no windows were broken ^{by} debris. This was because the current about the houses was so swift that it ~~diverted~~ the debris away from them before they could be struck. This, however, did not apply to homes like those of the Reardons and McKelligans ^{gotts} on Russell Street which were in the direct path of fast-running channels.

Three men in the McQueston home remained there through the entire flood. The house was on a rise of ground and was well shielded from the north by substantial buildings and the water ~~only~~ ^{only} rose ^{to} the height of mop boards, where it stayed for twenty-four hours. The second morning - Friday - two more men and two riding horses joined them. The horses had not been removed in time and were kept in the front parlor. They behaved well, only occasionally stamping their feet as they stood in the icy water, spraying it in all directions.

The flood water was the color of gray-brown cement, like liquid mud. The amount of debris floating through West Street was beyond description and included hundreds of tobacco rails, hot-bed sash, small buildings and dead animals. When a dead animal lodged in shallower water near the house, we pushed it into the deeper current so it would go along for someone else to bury later. A rowboat and canoe were used to travel to various buildings where animals had been housed on the second floor. The struggle to get a calf up steep back stairs to a second-floor bathroom where it was tied, made a very humorous tale. One barn had some chickens stored upstairs.. A large inboard motored coast guard boat was brought in Friday afternoon, the 20th, and used by the "big brass" for tours about the flooded area taking many photographs. ^{roared over head taking pictures} Airplanes ~~took pictures from over head.~~

Saturday afternoon, the 21st, the water seemed to be dropping rapidly, sometimes about an inch an hour, and higher spots of ground soon began to show. By

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4:00 P.M. It had gone down 26" below the crest. An area of devastation, almost too extensive to grasp, began to show. High winds on Sunday caused pressure on barns whose foundations had been undermined and many collapsed. One on Cemetery Road collapsed from the north end, looking almost exactly like a cow lying down. It remained with the eighth bent standing high. During the last days of the flood anyone in a boat around north West Street could hear the groaning of the beams in the barns and sheds as they began to settle after their underpinnings were washed out.

Army officials estimated that 25,000,000 tons of soil were in solution, which was enough to cover the thirty-eight square miles of flooded area in the Valley one inch thick. Mud was everywhere - on porches, sometimes fourteen inches thick; on floors; in cellars. Large drifts of it were on the south side of all standing objects. The north end of West Street Common had none, and the south Common had a good deposit of silt which could be reseeded after it dried out. At first it was so thick and sticky it was almost impossible to get to the houses. One woman tried to go but had to yell for help. The State Trooper who went to her rescue also became mired. Snow plows were used to push the mud off the hard-top roads.

Driveways and unfloored barns were deeply ^{gullied} gutted, and most cross paths were washed out where they were not turfed over.

Town officials started to use Town funds to help clean up, but when \$8,000 was gobbled up in a few days the job was becoming too expensive so fast that they got cold feet. After President Roosevelt authorized Federal funds for extra W.P.A. projects, some one hundred and eighty men were assigned to work clearing up wreckage, digging out and pumping out cellars, burying dead animals. The C.C.C. boys from many nearby camps did excellent clean-up jobs. Scores of barns had to have the hay removed to avoid spontaneous combustion. The tasks were endless, since new situations appeared daily to confound the weary supervisors at the Town Hall.

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The cemetery west of the town was a scene of utter desolation. Trees, logs, and sections of a bridge had been thrown in among some 1100 monuments which were bowled over, broken and buried in mud sometimes five feet deep. This location, in the direct line between Mt. Sugarloaf and Mt. Nonotuck, took the full fury of the flood. As the river rose it went exactly straight. The main channels were mill ponds, while the long peninsula was heavily scored. Only a small number of monuments remained unright as when the ice packs had roared through, the water had not been very deep. Ice and debris piled up against all the stones until pressure became strong enough to overturn them. No one has ever been able to estimate the damage in dollars to the marble and slate stones which were broken and cracked and even carried away.

About fifty men labored for three months setting up stones and repairing fencing. Twice that number shoveled dirt into trucks to be carted away to fill washouts and dikes. There were no washouts in the cemetery as the turf prevented it. For a time it was feared that the steel vaults, then in popular use, might have ~~been raised up~~ *raised like pontoons*. But none did.

The water levels of this flood were something no living person had ever seen. Geologists could compare it with the information which they have obtained about floods during the glacial period.

The river water flowed into all streams and drainage ditches that were 130 feet above sea level or less. Water set back up Fort River as far as Amherst. It meandered back through brooks and filled the back country, east of River Drive (Route 47) and eventually became high enough to join with the river water west of the north-south highway. This highway was covered in Russellville and south of North Hadley as far as Coleman's Brook. Water from drainage ditches ran as far back as Spruce Hill on Russell Street. It was deep where the Legion Building now stands. West of Middle Street it came as far as the stop light in front of

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the Town Hall on Russell Street. Middle Street at Maple Avenue, and Day Road west of the Callahan farm were covered. Of course everything west of Middle Street was deeply immersed. For a while the railroad embankment acted as a sort of dike and the southward flow of water was kept down to three granite culverts under the railroad in natural water flows. As the water rose higher on Wednesday the 18th the culverts washed out and in course of time the entire railroad track was destroyed. In some places the tracks were suspended over deeply scored waterways; in others they stood on end and resembled a husky type of snow fencing. The main stream of the river now was in a straight line from Sugarloaf Mountain to Mt. Tom Junction and all the debris and ice swept forward across Hadley Plain and Northampton Meadows. Turfed areas stood up well, but uncovered fields, soft from a week's thawing rain, were given a terrible scouring. Hockanum Meadows had been subjected to this the week before the main flood when ice jams at Mt. Tom curve must have gone clear to the bottom of the river. Although there had been much talk about dynamiting the ice jam, the power officials had pull enough to squelch such efforts to release the jam. It finally began to move on Saturday, the 13th, and before Sunday morning the water level at the north end of West Street had fallen eight feet. It was later thought that it must have been this ice which struck the Holyoke dam knocking nearly four feet off the crest of the dam. This was a blessing to Hadley as it lowered the possible top level in Hadley by about two feet. When the Holyoke dam canals are shut off on Saturdays during the summer the ponding effect is felt as far north as Sunderland bridge, and the Saturday to Monday rise at the north end of West Street is twenty-two inches.

On Friday, March 20th, the river began to drop part of an inch an hour. There was much boating about West Street as owners tried to visit their homes and barns to find out about the damage. Three men in a boat took about forty-five minutes to oar a boat from the Elmwood Hotel at the top of West Street as far as the McQueston home. The current ran so swiftly that a moment's pause and back they went.

About 2:00 P.M. Friday, March 20th, a young man from Easthampton, named ~~Chuck~~ ^{C/ak}, appeared on West Street in a well-shaped boat with a Ford Motor inside, which seemed to have power enough to cope with the current. At the McQueston home the double front doors were opened and chairs placed for those who wished to watch the big snow, and many boats stopped by for a chat. Diagonally across the street was the Mat sko home with what had been a well-made leaf bank^{up} on its north side. As the sun came out, it was noticed that a medium-sized pig and a black cat were perched on the top ~~of~~ it just above the water line. Just then John Reardon and Paul Hannigan hove in sight in their canoe and decided to try to rescue these animals. After quite a struggle they managed to get the pig into the boat and across the street to the south porch of the Hannigan home, which was above the water level and still had the telephone working. People in nearby houses could wade over and feed him occasionally. The terrified black cat leaped high in the air, dived into the water and crawled into a barn attached to the west end of the house. Mr. Hannigan was spending most of his time on police duty and was not told about the pig before his next trip home to look around. By this time the pig had been smart enough to push open the screen door and the front door, which had not been properly latched, and was inside. Mr. Hannigan was astounded to hear a big "woof-woof" and to see a pig dashing about overturning chairs. After quite a chase the pig was returned to the porch where he buried himself under a couple of rugs stored there. Mr. Hannigan said later, "I never was so startled in my life and could not make out in my mind at first whether I actually had a pig in my parlor or not!" *Sometime later Joseph Deici identified the pig as his. It had floated from #1 No West St to #32 -*

While the water was high no one had any idea how many deep holes had been washed into driveways, sidewalks and yards near corners of buildings. The many unturfed crossroads running from east to west ^{across} off West Street Common were washed down eight or nine feet deep. On this particular Sunday many people got well ducked by

Four Floods in Fifty Years

stepping off solid ground into what turned out to be bottomless holes. One man was observed to step forward to get into a boat, and presto, he went down and only his felt hat was floating! When he came up for air, he was grasped by his companions and hauled to safety. After that everyone pushed a pole ahead, before taking a step forward.

Three young men coming in a boat to a farm to feed chickens which had been placed in the second story of a building for safety, found the large garage doors had been burst open and a floating fanning mill had stuck in the doorway. On the top of this was the large ^Xskunk ever seen. They did not want him there as that was where they wanted to go, and also they were afraid he might get hungry and go upstairs and eat the hens. Back at the house the lighter man was boosted onto the porch roof and entering the house from there he brought down a rifle. Holding the boat to a cherry tree, several shots fired into the skunk topped him into the water. When the water receded ^{he was found} ~~we found him~~ on a lawn five houses down the street.

Where things floated to was a never-ending surprise. Much of the moveable and floatable material from West Street was found in Fort Meadow below Indian Hill. The top cap of a tombstone from the cemetery was found by James Learle on an ice cake near the old mill on Fort River.

The McQueston home on north West Street was a haven for the brave who ventured forth in the flooded area. There was quite a bit of food which had been destined for a cancelled church supper on the 18th, and more was brought in from other houses. The men there lived high on a large porker which had just come home from being cured and smoked. They could cook on an electric stove which was in fifteen inches of water and on which the medium power was still working. Both ~~or~~ High and Low were out of order.

After-Maths

There were several days of rain after the flood receded, but the weather was mild. Householders trying to clean up were greatly impeded by the muddy yards and things were put out to dry on piazza roofs, where available. Then the great dust storms began. Day after day the meadow plains were visited by wind-driven dust which was so thick that you could not see the radiator cap from behind the wheel of the car you were driving. Great bull-dozers pushed sand off from buried fields. Others equipped with great plows turned the sand under and brought up newer soils from three or four feet down. In places where the water had run swiftly there were no deposits of silt, but plenty of sand and gravel, which partially filled many ravines. On the south side of barns and on knolls silt of varying richness was found. The great meadow plain was never to return to its former richness within our lifetime. The change in the soil structure made it necessary to grow a different type of crop. ASPARAGUS is grown the most frequently and there is an occasional potato field. Some areas were so heavily scoured that they lost soil to a depth of twelve feet. The ravines were usually triangular in shape, with the wide end toward the channel of the Connecticut River.

The life of the refugees who were housed at the two colleges was so different that at first they were sort of stunned and walked and talked in a subdued way. By Monday most of them were wandering back home. For a while the Red Cross served meals in the First Congregational Church dining room, but it soon became apparent that there were many there who did not need to be, and were just mooching. Some food was given out to families who were not yet able to live normally in their homes. Sleeping upstairs could be comfortable while down stairs repairs still had to be made. The Red Cross investigated to find out how much financial help families needed to help in reconstruction. Although the amounts varied, it all helped. Five families whose homes were badly wrecked received generous aid. If your mortgage was in the bank which had the most officials on the directorate you had it made.

Four Floods in Fifty Years
by Frank C. Reynolds

Hurricane and Flood of 1938

The hurricane and flood of September, 1938, occurred at a time when a tropical storm was passing over New England but was in part caused by conditions not closely connected with it. Most of the precipitation responsible for the flood was due to a continental disturbance which had centered over the Great Lakes area. The three inches of rain that fell during the first storm, September 12th to 16th, had saturated the ground thoroughly and caused the streams to swell. The added water from the hurricane made the tributary streams of the Connecticut rise with great rapidity and considerable damage was done. In Hadley crops were spoiled. Tobacco in the barns flattened by the hurricane was damaged by the water. As dikes broke again, the railroad was washed out and cellars were flooded.

Hadley had been enduring several days of damp, muggy weather accompanied as usual by low pressure. The hurricane came boiling up the coast and sailed up the Valley. No one had paid much attention to the rather vague hurricane warnings believing that that sort of thing would not strike so far inland. On September 22nd at about 4:30 P.M. a violent wind struck Hadley and blew with great force from the East for about one hour. There was a quiet period for a few moments as the eye of the storm passed, and then

the wind swung into the South. Accompanied by heavy rain that lashed along in parallel waves of white, it would blow in gusts for short periods, slow up and then strike again with redoubled fury. Large trees that had survived centuries of storms, fell heavily to the ground or were slowly beaten down, uprooted or broken off. The East wind took most of them, but some that remained went down as did some barns when the wind changed to the South. Pieces of buildings flew through the air, metal shingles and slates skimmed along like flocks of doves, water ran up the roofs instead of down. As I watched a nearby house the water ran up the east side and came down on the west side in a regular waterfall from the eaves. The north end of Middle Street was a shambles with fallen trees. Two elms fell on the George Fill house hitting the rafters and gradually crushing the roof down to the attic floor, terrifying the occupants. On the west side of West Street a large elm which stood close to John Koloski's home, was uprooted and came to rest against the house at a sharp angle. This house had the older type of framed and pinned beams and was not crushed too much. Two beautiful umbrella-type elms, three centuries old, standing in front of the McGrath home, were downed. One broke off at the base, the other was uprooted. One struck a Chevrolet truck driven by Road Superintendent William Chmura. The upper branches enfolded the cab and the driver had to crawl

through a window and chop them away so he could proceed home. This was one of the many close escapes. Falling trees made a shambles of telephone and electric wires. Telephone service was soon restored, but repairs to the electric lines took longer due to a shortage of transformers and other necessary materials. Some sections were without power for two months. Kerosene lamps, stored in attics for twenty-six years, were resurrected and placed in use. No one had expected it would be so long. It was as though the calendar had been turned back a century.

Most of the tobacco barns seem to be built with the long way east and west, so the end was headed into the easterly gale. No doubt they were weakened by the hour-long blow with winds near 120 m.p.h. and could not withstand the sudden change into the south. Sheds with a capacity of 639 acres of shed room were destroyed and many of those in the area south of Rocky Hill Road have not been rebuilt. North Hadley was badly shaken by the blow and many barns went down, but the tobacco there was not destroyed by the flood. People chopped holes in the barn roofs and worked for days salvaging what they could of the cured tobacco. When the dikes broke, the onions that were lying on the home lots in bags were washed away.

The winds seemed to follow definite paths. In the center of the town the most forceful line was southeast to northwest. Not one barn at the south end of West Street

was blown down. One was unroofed and some moved a bit on their foundations. From Russell Street north, eight barns fell. On the east side of West Street, from the railroad to the river, forty-two trees were blown down.

Many of the tobacco sheds built during the boom of World War I were "jerry-built", the popular method being to set large chestnut poles in the ground and build a frame around them. On account of the depression in the tobacco business needed repairs had not been made. However, it is doubtful if any shed actually in the path of the hurricane could have been strong enough to withstand this terrific blow. All types of construction went down at this time, many because they were not bolted to a cement base. A tight barn on the Arthur Conant farm practically exploded from the vacuum around it. Strong barns on the large plantation at the Sunderland-Hadley line fell, whereas an old barn full of cracks and holes on a nearby farm remained standing.

Lawrence Plain, for half a mile north of the Holyoke Range, was protected from the South wind, which did major damage where it hit the ground again. Living quarters attached to a barn owned by Mary Dec were destroyed, and one daughter was injured by flying debris.

People sheltered in the Town Hall watched the spire of the First Church as it seemed to weave about under the fierce blasts, and were afraid that it would go. However,

only the roofing was damaged. The Town Hall lost its chimney and its roofing was loosened. The fire station chimney was blown level with the roof and the wind unfastened the yoke of the bell as it swung wildly, so that it rested against timbers below.

Scores of men started the task of sawing up trees that were across the highways. As chainsaws were not common at this time, it took months to clear away the debris. The gnarled and twisted limbs of an elm tree defy splitting. Many people shy away from the task of working up elms for fire wood. Many big logs had to be blown apart with powder in order to make them small enough to be dragged to the dumps. A vast deposit of trees and wreckage floated into the Fort Meadow background where it later caused bother when Fourth of July pranksters set it afire.

The heart of this big blow occurred at just the time hundreds of people were driving home from work. Trees fell in front and in back of moving autos. There were many hair-raising escapes. Many drivers, trying to walk home after their cars became entangled with fallen wires, were blown flat and had to crawl along. North Hadley Center, protected on the southeast by Mt. Warner elevation, felt the storm less than the areas on all sides of it where damage was heavy. Fields of potatoes were so thoroughly soaked that they were never dug, and drainage ditches were

overloaded for months.

This hurricane was the first major catastrophe that more or less encompassed the entire town. Prior to this, general damage had been in all areas lower than 100 feet above sea level in the Connecticut River flood basin. Hundreds of people who did not have wind insurance had to stand their losses unaided. Those few who had insurance were lucky. Coming just two years after the tremendous losses of 1936, it was a bitter pill to swallow. This third first-class flood in two years again buried in sand the fields which were well on their way toward the recovery of their fertility.

One old-timer quoting a verse from the Bible: "He whom God loveth, He chastiseth" said "I only wish He did not love us so much."

The Hadley Farm Museum
by Ben Drabeck

Anyone interested in how various phases of living were accomplished by early New England settlers, untrammelled by devices (and time payments), can discover the thrill of early Americana by visiting one of Old Hadley's most famous properties - the Hadley Farm Museum on Russell Street.

This imposing structure is the final resting place of items ranging from yeast makers and old-fashioned churns to ornate sleighs. Emphasis, of course, is on farm equipment - and these colonial implements, tools, utensils and vehicles constitute the bulk of the exhibit.

Appropriately enough, this home of farm items is a barn built in 1782 and moved to its present site in 1930. Formerly it was part of the Porter-Phelps-Huntington estate on River Drive, but, given by Dr. James Huntington, it was moved slowly and in one piece by the Johnson family. They were responsible for its relocation, restoration and redecoration. They also collected and assembled the items on display.

The spacious building is divided into four main areas: The cellar, first floor, upstairs and loft.

The dark cellar holds some of the heavy tools, including hand-hewn garden implements. In this atmospheric area are harrow, plows, threshing and winnowing machines,

horse treadmills and blacksmith tools. In its construction, however, it does differ from a colonial basement. Dry stone walls (complete with cobwebs) were not judged desirable, so smooth and modern concrete was used for the floor, walls and stairways.

The first floor provides fascination for the coach-conscious. Here are displayed many wagons and sleighs from by-gone days. The children especially love the old stage coach and clipper sleighs. A market pung, a tin-peddler's cart and a century-old moving machine add further interest, as do the lesser vehicles used when oxen and horses provided the motive power.

On the second floor are the exhibits of industry, hand-work, manufacture and craft found on the farm and in the kitchen. Here the observer can see how great-great grandpa and ma did their chores - and with what equipment they worked. Women can sympathize with the home-maker who used these cheese presses, butter churns, apple parers, food choppers, grain cradles, winnowing baskets and sap buckets. And here the men can inspect the broom-making machines, corn planters, vegetable planters, harness vises and home-made traps.

Models of the first washing machines, stoves, flat irons and tinware remind modernists of the humble beginnings of home conveniences.

Under the rafters, an industry of the home is in-

dicated by the display of flax wheels, spinning wheels, looms, flax breakers, carders, niddy-noddies, yarn winders, and all the equipment necessary to keep the family in clothing.

The late Clifton Johnson of Hadley wrote "The Tribulations of Founding a Farm Museum," which was published in the July 1932 edition of "Old Time New England," the bulletin of the Society for the Preservation of New England Antiquities. Explaining the background Mr. Johnson wrote:

"Fate made C. J. something of an author and illustrator, and Henry R. a successful Springfield bookseller. The years slipped along until a time when the bookseller added an antique department to his business and began learning in the school of hard knocks how to run it. He was both blessed and handicapped by a lively imagination, and one never could be sure in any particular instance whether it were taking him in a Heaven's wate or escorting him out. He could see possibilities in the contents of dusty garrets not visible to anyone else, nor even to himself after he got away from the magic gloom of the garret environment; and he became the owner of an always increasing accumulation of junk. When the garage and relatives could absorb no more, he began using doubtful treasures to adorn his summer residence and one or two lessed buildings on the premises.

"Meanwhile, C. J. had gone back to the old farm for

a home. He had a barn that was partly empty, and Henry R., who, like nature, abhorred a vacuum, got the privilege of putting some of his unappreciated antiques in the unfilled barn space. What he brought there, however, were chiefly farm implements. His exploring of old homes had not stopped in the garret. If conditions were promising, he went thoroughly through the premises, even the cellar, barn and sheds. The old plows, forks, ox yokes and vehicles fascinated him.

"It so happened one day that he came across an enormous clumsy oxcart that charmed him. The framework was heavy timber and the hubs of the wheels were suggestive in size of bushel baskets. Such a vehicle was an extremely interesting relic, and he bought it." The problem arose about where to store it, "and as a last resort he left it in the cow pasture at his boyhood home. C. J. viewed the monstrous vehicle with some concern. It seemed perceptibly to diminish the pasture space; and on the next convenient occasion he had a heart to heart talk with Henry R. 'What you need,' he said, 'is a museum to house the kind of things you like to buy. Buy the most antique barn you can find and have a farm museum that the public can visit.'

"Henry R. had begun to feel like a man who had accumulated a lot of homeless orphans, and the idea of housing the things appealed to him. Moreover, he enjoyed

the collecting so keenly he didn't want to stop. He and the other Johnsons talked things over and agreed: first-ly, that some sort of a rustic museum should be provided; secondly, that it was not to illustrate furniture, costumes, and the indoor life of the old homes, for that was well and widely done already; thirdly, that the dividing line between those exhibits and theirs was at the back door, beyond which there would be included the sheds, barns and other structures, and whatever was significant in relation to labor in the fields and woodland, and in connection with domestic animals and travel on the highway.

"Apparently Providence approved of the plan, because within a week the ideal barn for such a museum had been found. The owner was a Boston physician, James L. Huntington, 'Squire of "Forty Acres," a beautiful estate in the Northerly part of Hadley which had belonged to his ancestors back as far as Captain Moses Porter who was killed by the Indians at Crown Point in 1755. The Squire had no use for his barn, and on hearing of the museum project he promptly offered it as a gift."

Dr. Huntington described the transaction which led to his donation of the barn in his excellent history of the family estate entitled "Forty Acres" as follows:

"When I took over the ownership of Forty Acres, the huge barn, built in 1783, was still a beautiful building, but in shocking condition. The great roof leaked in many

places. Also, it was far too near the house for comfort or safety in case of fire, and finally, since there was to be no farming on the place, it had no further use. I chanced to meet Clifton Johnson a day or two after I had taken ownership and he almost immediately told me that he had a great favor to ask which he hoped I would weigh carefully before refusing.

The Johnson brothers had decided that the proper structure for a farm museum should not resemble a public building but should look like a barn. They had studied the countryside for miles around and had agreed that my barn was the nearest approach to the building they had in mind. Would I allow them to copy it. I replied at once that I would be proud and happy to have them do so. Then it suddenly occurred to me - why not give them my barn so that the building would be absolutely authentic.

"Early the next morning I telephoned Clifton Johnson. When he heard my name said, 'Oh!' You haven't changed your mind about the barn have you.' 'Not exactly, but would you and your brother consider taking my barn as a gift?' There was a long pause and then with great emotion he said, 'You mean you are offering your barn to us for a museum?' 'That is exactly what I mean,' I replied. In a surprisingly short time, Mr. Johnson and the architect, Mr. Guy Kirkham, from Springfield were on the spot making plans for the museum. The Johnsons, instead of

taking down the barn, which would not have been difficult, as it was all pegged together and then re-assembling it on the new location, preferred rather to incur the greater expense of moving the building as a whole so as to preserve all its original flavor."

Elaborate preparations (for this was not yet the time of monster machines) for the gigantic transplanting were completed and when all was ready, the late Mr. Johnson writes, "The barn, well braced, and supported on two giant timbers from the forests of Oregon, crept from its moorings and went creaking across the domain of the 'Squire of Forty Acres.' A horse, walking round and round hitched to a windless bar, furnished the power. Beyond 'Forty Acres' was a steep rise to the highway, and here jackscrews and cobhouse piles of railway ties were used to get the building up to the road level. From there on, most of the hauling was done by a tractor with the tackle hitched to trees.

"A wayside dweller, viewing the ramshackle structure and the litter of branches and brush in its wake, remarked, 'This looks like Sherman's march to the sea!'

"One week-end the barn was left on the highway directly in front of a residence. Vehicles had to pass over the lawn, and all day Sunday the children of the house collected tolls - ten cents for each automobile. Even the owner of the barn, who came to see it, had to pay.

"Slowly, but surely, the building kept on until it arrived at the ravine of Coleman's brook, which the barn had to cross 35 feet above the level of the brook. The workmen were under the barn guiding the rolls as the building slid along. At a little distance Reuben Pomeroy, the contractor, was watching when he saw the timbers under the rolls begin to sag. Everything depended on keeping the barn moving. If it stopped, all was lost. Not a man failed him. They kept to their tasks, even though the timbers started to crack and snap. He joined them, they bridged over the weak place, and the ancient barn was saved."

When the barn was finally in place, on Russell St., much work had to be done to harmonize it with its surroundings. The structure was covered with clapboards and painted white. The visitors' entrance duplicated the double front door of the oldest house in town. At a corner was suspended a sign resembling those used for taverns of old.

The immaculate whiteness of its broad exterior contrasts prettily with the greens and browns of surrounding bushes and trees. Within, however, there is no paint at all! Reinforcing boards, big hand-hewn beams and rafters were taken from barns in the hill-town areas to strengthen the barn. Staircases were installed to match the fittings. The steps and handrails were fastened

in with wooden pins.

When the structure was finally completed it was dedicated in 1931 on the afternoon of May 27th, with exercises held in the First Congregational Church. Mr. Clifton Johnson presided, and with great charm and humor, introduced the speakers. Addresses were made by Dr. Frederick J. Sievers, representing the State College; Waldo Cook, editor of the Springfield Republican; the architect, Guy Kirkham of Springfield, and Henry R. Johnson. Dr. Huntington told the story of the barn. The principal address, however, was made by Homer Eaton Keyes, editor of the magazine, *Optiques*.

Since its dedication, thousands of persons of every age, from every state in the union and from many foreign countries have visited the Museum. Most of them have signed the guest book, and some have recorded comments which range from "Fascinating" (the most common one) to "It's too old-fashioned!"

Ashley Cook of Hadley, who retired last year from his post as mailman in Amherst, has taken the responsibilities of care-taker and guide. His obvious interest in the museum and its articles gives additional pleasure to historically minded visitors.

Recently Roger Johnson feeling that the museum should be in the hands of an organization that could insure its permanence arranged that the Massachusetts Society for

Promoting Agriculture should become the owners. This was effected on November 1, 1957.

During the season when the Museum is open (May 1 - October 12) ^{*} ~~it is a magnet attracting~~ many groups and individuals. ~~are shown the~~ ^{are shown the} ~~relics~~ ^{relics} providing a tangible record of the past. To those who may be harried by the bustle of modernity ~~at~~ ^{the museum} its frantic heat (or worst), it offers a refreshing contact with ^{its} ~~an~~ aura of wholesomeness and simplicity.

** under the expert guidance of the first custodian Mr Ashley Cook*

Presenting the following results of the survey. This was

effected on November 1, 1937.

During the season when the station is open (May 1 -

October 31) the following results were obtained and in-

dividuals are shown in the table.

These birds are included by the results of subsequent

surveys (see also page 11), as they were not included

with the birds of the season and also.

Under the name of the bird
 the following are listed

